

REMARKS

No new matter has been added. Claims 1-7 and 17-24 were canceled in prior amendments. Claims 8-16 and 25-28 remain pending. Reconsideration is respectfully requested.

***Claim Rejections -- 35 U.S.C. §103***

Claims 8-11 and 25-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,018,524 to Turner et al. ("Turner") in view of U.S. Patent No. 7,162,481 to Richardson et al. ("Richardson"). Applicant respectfully disagrees with the reasons for rejection.

Claim 8 recites, in part:

forming a hierarchical tree structure having root, branch and leaf nodes that define (i) at least a minimum number (N/T) of sub-databases of the forwarding database and (ii) respective bit combinations associated with the sub-databases, wherein each prefix of the N prefixes is stored within one of the sub-databases having an associated bit combination that matches corresponding bits within the prefix, and wherein each of the sub-databases has no more than a predetermined number (T) of prefixes, and at least one of the sub-databases includes a plurality of the prefixes;

Richardson describes a multi-bit trie structure for storing prefixes that are "divided into segments of a small number of bits" (Richardson, col. 4 lines 5-19). In Richardson, one or more data tables are provided for each segment of a given prefix, such that each table entry "represents one of  $2^n$  possible values of the corresponding n-bit prefix *segment*" (Richardson, Fig. 3, col. 5 lines 19-24, emphasis added). In other words, applicant submits that no individual data table in Richardson stores an entire prefix. Thus, even assuming *arguendo* that the data tables of Richardson correspond to sub-databases, as suggested in the Office Action, Richardson still does not disclose or suggest that at least one of the data tables "includes a plurality of the *prefixes*," as recited in claim 8.

As stated in the Office Action, Turner also does not disclose or suggest at least the

above-recited limitation. For at least the foregoing reasons, applicant submits that even if Richardson and Turner could be combined in the manner proposed by the Office Action, such combination would still lack at least the above-recited limitation and therefore would not have rendered claim 8, nor dependent claims 9-11, obvious.

Claim 25 recites, in part:

form a hierarchical tree structure having root, branch and leaf nodes that define (i) at least a minimum number ( $N/T$ ) of sub-databases of the forwarding database and (ii) respective bit combinations associated with the sub-databases, wherein each prefix of the  $N$  prefixes is stored within one of sub-databases having an associated bit combination that matches corresponding bits within the prefix, and wherein each of the sub-databases has no more than a predetermined number ( $T$ ) of prefixes, and at least one of the sub-databases includes a plurality of the prefixes;

Applicant submits that, for at least the reasons given with respect to claim 8, neither Turner nor Richardson discloses the above-recited limitation. Thus, even if Turner and Richardson could be combined in the manner proposed by the Office Action, such combination would still lack at least the above-recited limitation and therefore would not have rendered claim 25, nor dependent claims 26-28, obvious.

Claims 12-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Turner in view of Richardson, and further in view of U.S. Patent No. 6,735,600 to Andreev et al. ("Andreev"). Applicant respectfully disagrees with the reasons for rejection.

Claims 12-16 depend from claim 8, and therefore include the limitation:

forming a hierarchical tree structure having root, branch and leaf nodes that define (i) at least a minimum number ( $N/T$ ) of sub-databases of the forwarding database and (ii) respective bit combinations associated with the sub-databases, wherein each prefix of the  $N$  prefixes is stored within one of the sub-databases having an associated bit combination that matches corresponding bits within the prefix, and wherein each of the sub-databases has no more than a predetermined number ( $T$ ) of

prefixes, and at least one of the sub-databases includes a plurality of the prefixes;

Applicant submits that, for at least the reasons given with respect to claim 8, neither Turner nor Richardson discloses the above-recited limitation. Applicant further submits that Andreev also does not disclose the above-recited limitation. Thus, even if Turner, Richardson and Andreev could be combined in the manner proposed by the Office Action, such combination would still lack at least the above-recited limitation and therefore would not have rendered claims 12-16 obvious.

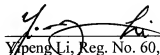
***Conclusion***

Applicant respectfully submits that all pending claims are in condition for allowance. If a telephone interview would be helpful in any way, the Examiner is invited to call the undersigned agent.

Applicant hereby petitions for any necessary extension of time and authorizes deposit account 50-1914 to be charged for any fees due, including any fee required in connection with a petition for extension of time.

Respectfully submitted,

Date: August 13, 2008

  
Yipeng Li, Reg. No. 60,595  
Tel. 408-236-6640